RF and mmWave Circuit Design

OCTAVE INSTALLATION

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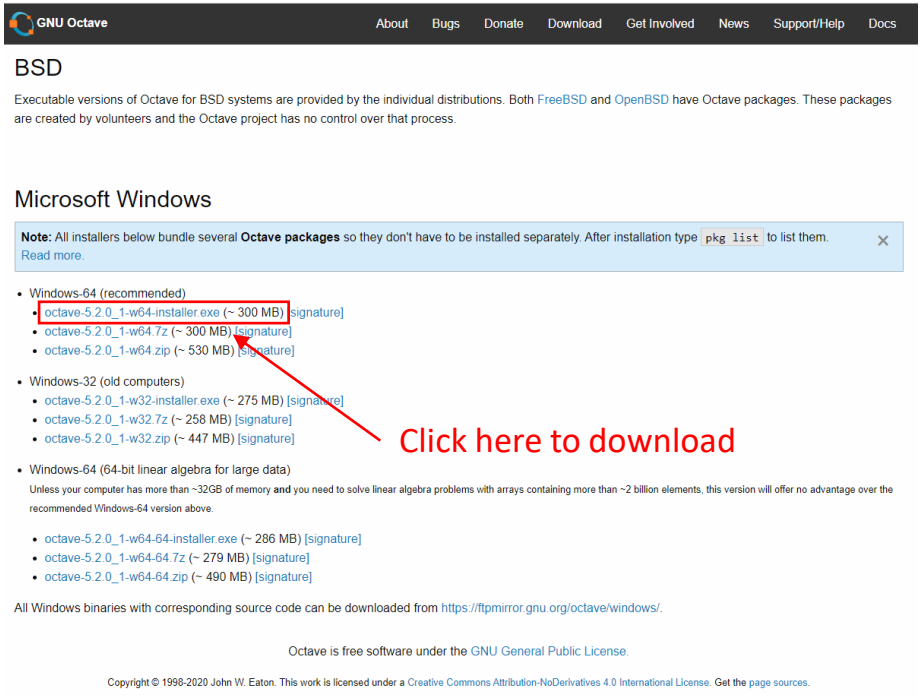
Download of Octave

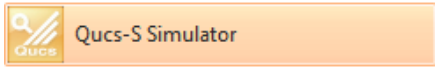
1. Download Octave
    - Octave Documentation

Installation of Octave

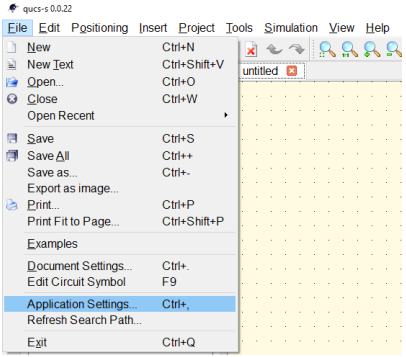


Integration of Octave into Qucs-S

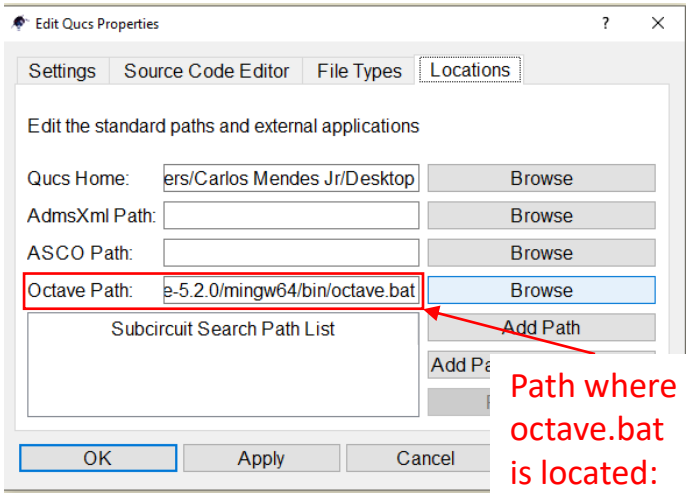
1. From *Start* menu open Qucs-S Simulator



2. Go to *File* menu and open *Application Settings*



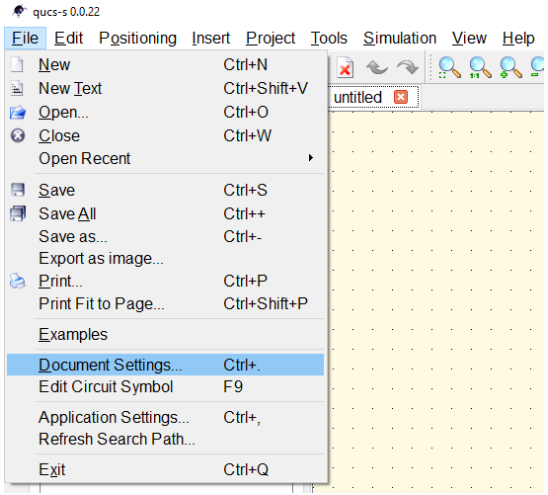
3. Select *Locations* tab and *Browse* the Octave path executable



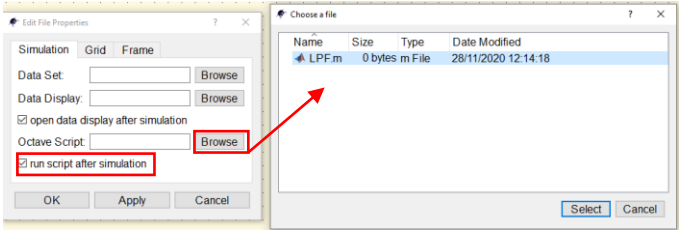
C:/Program Files/Octave/Octave-5.2.0/mingw64/bin/octave.bat

Integration of Octave into Qucs-S

4. Go to *File* menu open *Document Settings*



5. On *Simulation* tab make sure to check the *run script after simulation* box and to *Browse* the Octave file you want to add.



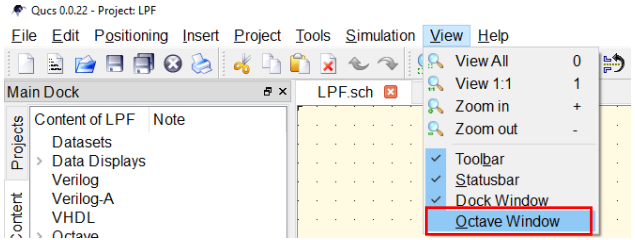
OBS.: The octave file you want to add has to be inside the Qucs-S project folder, e.g., the LPF_prj we previously created.

Integration of Octave into Qucs-S

6. Open the Octave and make sure to add the Qucs handling functions correctly.

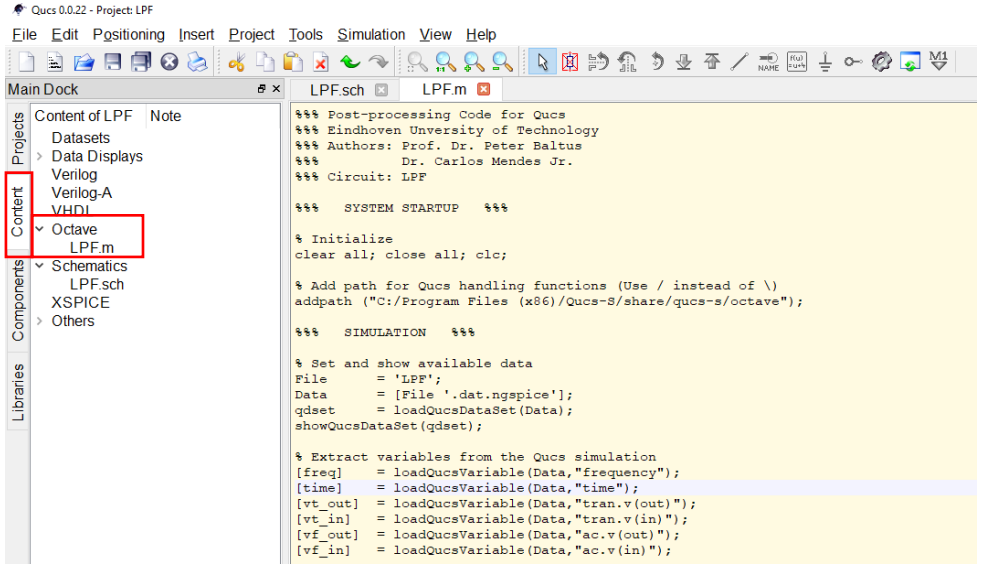
```
%%% Post-processing Code for Qucs
%%% Eindhoven Unversity of Technology
%%% Authors: Prof. Dr. Peter Baltus
%%%          Dr. Carlos Mendes Jr.
%%% Circuit: LPF

%%%   SYSTEM STARTUP   %%%

% Initialize
clear all; close all; clc;

% Add path for Qucs handling functions (Use / instead of \)
addpath ("C:/Program Files (x86)/Qucs-S/share/qucs-s/octave");

%%%   SIMULATION   %%%

% Set and show available data
File      = 'LPF';
Data      = [File '.dat.ngspice'];
qdset     = loadQucsDataSet(Data);
showQucsDataSet(qdset);
```

7. It is possible to see Octave window inside Qucs-S by enabling *Octave Window* under *View* menu.



Integration of Octave into Qucs-S

8. It is even possible to edit Octave file inside Qucs-S. Under *Content* tab, just double click the Octave file.

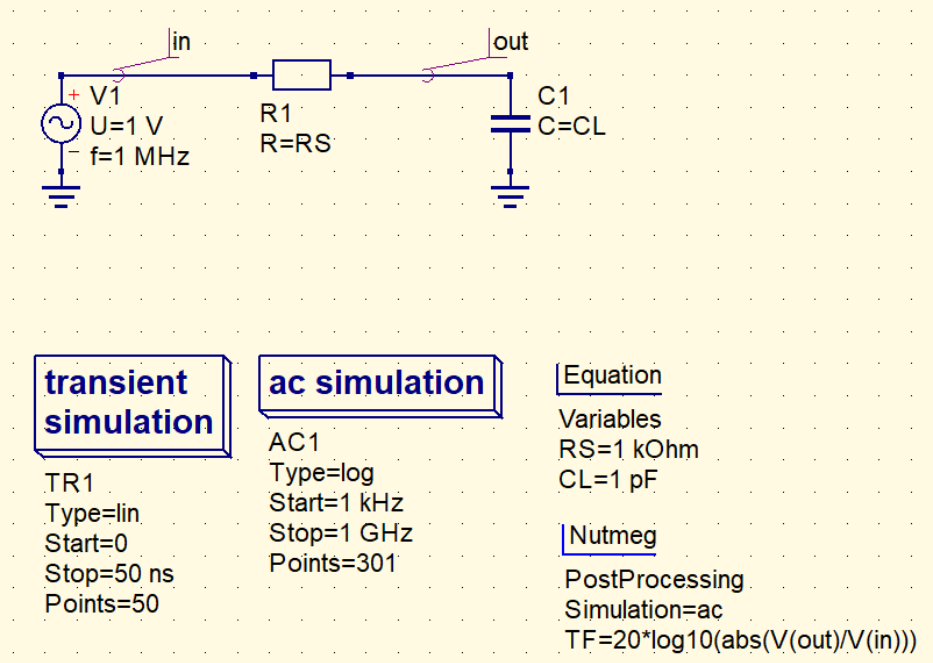


Simulation example

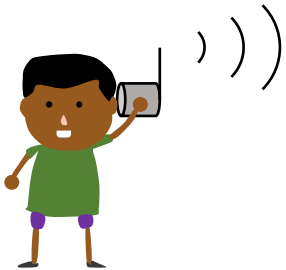
Low Pass Filter Simulation

- Transient
- AC

Post Processing in Octave



Thanks for watching!



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